

Remarks/Arguments

Claims 1, 2, 4, 6-10, 13 and 14 are currently pending in the application for the Examiner's review and reconsideration. Claims 5, 11, 12 and 15-33 are withdrawn as drawn to non-elected species.

Claims 1 and 4 have been amended. Support for the amendment can be found at paragraph [0020], page 7 of the specification. Claim 10 has been amended to correct a minor typographical error. Therefore, there is no issue of new matter. Claim 3 has been cancelled.

Rejections under 35 U.S.C. §102

Claims 1-4, 6-9 and 13 are rejected under 35 U.S.C.102 (b) as being anticipated by U.S. Patent No. 5,788,166 to Valaskovic, et al. ("Valaskovic") for the reasons set forth at page 3 of the Office Action. Claims 1-4, 6-8 and 13 are also rejected under 35 U.S.C.102 (b) as being anticipated by U.S. Patent No. 5,969,353 ("Hsieh") for the reasons set forth at page 4 of the Office Action. Claims 1-4, and 6-8 are further rejected under 35 U.S.C.102 (b) as being anticipated by U.S. Patent No. 6,941,033 to Taylor, et al.¹ ("Taylor") for the reasons set forth at pages 4-5 of the Office Action. Applicants respectfully traverse.

To anticipate a claim, the reference must disclose each and every element of the claimed invention. *Verdergaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987). Applicants respectfully submit that Valaskovic, Hsieh and Taylor do not disclose each and every element of these claims.

Although Applicants do not necessarily agree with the outstanding rejections, the claims have been amended herein to expedite prosecution of the current application. In particular, claim 1 has been amended to recite that the claimed device is used for the vapor phase deposition of a material onto a substrate. None of the references, Valaskovic, Hsieh or Taylor discloses a device that is used for the vapor phase deposition of a material onto a substrate. Therefore, it is respectfully submitted that Valaskovic, Hsieh and Taylor cannot anticipate the present claims. Claims 2, 4, 6-9 and 13 depend on claim 1 and thus include this limitation as well. It is respectfully submitted that the rejections to claims 1, 2, 4, 6-9 and 13 under 35 U.S.C. § 102(b) have been overcome and should therefore be withdrawn.

¹ Applicants note that U.S. Patent No. 6,941,033 to Taylor, et al. is not a properly cited reference under 35 U.S.C.102 (b).

Rejections under 35 U.S.C. §103 (a)

Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,788,166 to Valaskovic et al. (“Valaskovic”) as applied to claim 9 and further in view of U.S. Publication No. 2002/0076184 (“Iyoki”) for the reasons set forth on page 6 of the Office Action. Applicants respectfully traverse.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish *prima facie* obviousness, the prior art reference(s) must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). However, “a patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. ___, No. 04-1350, slip op. at 14 (April 30, 2007). Rather,

[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and to the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit.

Id. Further, “the claimed combination cannot change the principle of operation of the primary reference or render the reference inoperable for its intended purpose.” MPEP § 2145. Applicants respectfully submit that a *prima facie* case of obviousness has not been established by the cited references in regard to the currently pending claims.

The presently claimed invention is directed to a device for vapor phase deposition of a material onto a substrate comprising a base; a metal or metal oxide cladding coated on the base; a reservoir defined by the base and the cladding, wherein the reservoir has an opening, and the largest dimension of the opening is less than about 200 nm, and the material for vapor phase deposition is disposed within the reservoir.

In contrast, Valaskovic describes an ESI needle that can supply a sample at a flow rate of less than 0.25 nL/min. Valaskovic, however, does not teach or suggest a device that is used for vapor phase deposition of a material onto a substrate. To overcome the deficiencies of Valaskovic, the Examiner cites Iyoki.

Iyoki, however, does not overcome the deficiencies of Valaskovic. Iyoki relates to an optical fiber probe and cantilever having a microscopic aperture, used in a scanning near-field

microscope, and to a method of forming this aperture. Iyoki's apparatus also does not teach or suggest a device that is used for vapor phase deposition of a material onto a substrate. According to the present invention, when energy is applied to deposition apparatus 410, material is ejected through opening 235 (not illustrated directly in FIG. 4, see FIG. 2) and deposited on substrate 450. This deposition is illustrated as vapor phase organic material 415 in FIG. 4. In addition, by choosing an appropriate energy, the material being deposited may be vaporized slowly, such that the vapor pressure at the temperature generated by the applied energy determines the amount of material expelled from the opening. As a result, the material may be deposited over a period of time and many features may be fabricated without reloading the deposition apparatus with material. (*see* paragraph [0020] at page 7 of the specification). Thus, absent such guidance from Iyoki, Iyoki provides no reason for one of ordinary skill in the art to obtain the presently claimed invention. That is, there would be no reason for one of ordinary skill in the art to modify the disclosure of Valaskovic with the disclosure of Iyoki to obtain a device that is used for vapor phase deposition of a material onto a substrate.

Claims 9, 13 and 14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,941,033 to Taylor et al. ("Taylor") as applied to claim 1 and further in view of U.S. Publication No. 2002/0076184 ("Iyoki") for the reasons set forth on pages 6-7 of the Office Action. Applicants respectfully traverse.

Claim 1 has been amended to recite that the claimed device is used for vapor phase deposition of a material onto a substrate, claims 9, 13 and 14 depend on claim 1, and thus include this limitation as well.

In contrast, Taylor describes a method of manipulating a microscopic quantity of material, for example, in the order of attoliters (1 attoliter = 10^{-18} liter) to a number of zeptoliters (1 zeptoliter = 10^{-21} liters), comprising providing an optical fiber probe having a tip with a hole fabricated therein, immersing the tip in the material and sending laser radiation through the optical fiber probe to disrupt the virtual seal and thereby promote entry of the material into the hole. Taylor, however, does not teach or suggest a device that is used for vapor phase deposition of a material onto a substrate. Similarly, Iyoki does not overcome the deficiencies of Taylor. That is, there would be no reason for one of ordinary skill in the art to modify the disclosure of Taylor with the disclosure of Iyoki to obtain a device that is used for vapor phase deposition of a material onto a substrate.

Therefore, Valaskovic, Taylor and Iyoki, alone or in combination, do not disclose or suggest the presently claimed invention, and provide no reason to arrive at the presently

claimed invention. Accordingly, it is respectfully requested that the Examiner withdraw the rejections of the claims under 35 U.S.C. § 103(a).

Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. Early and favorable action by the Examiner is earnestly solicited. If the Examiner believes that issues may be resolved by a telephone interview, the Examiner is invited to telephone the undersigned at the number below.

Respectfully Submitted,

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